

Supporting Information

Controlled synthesis of highly stable zeolitic imidazolate framework-67 dodecahedra and their use towards the templated formation of hollow Co_3O_4 catalyst for CO oxidation

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S1

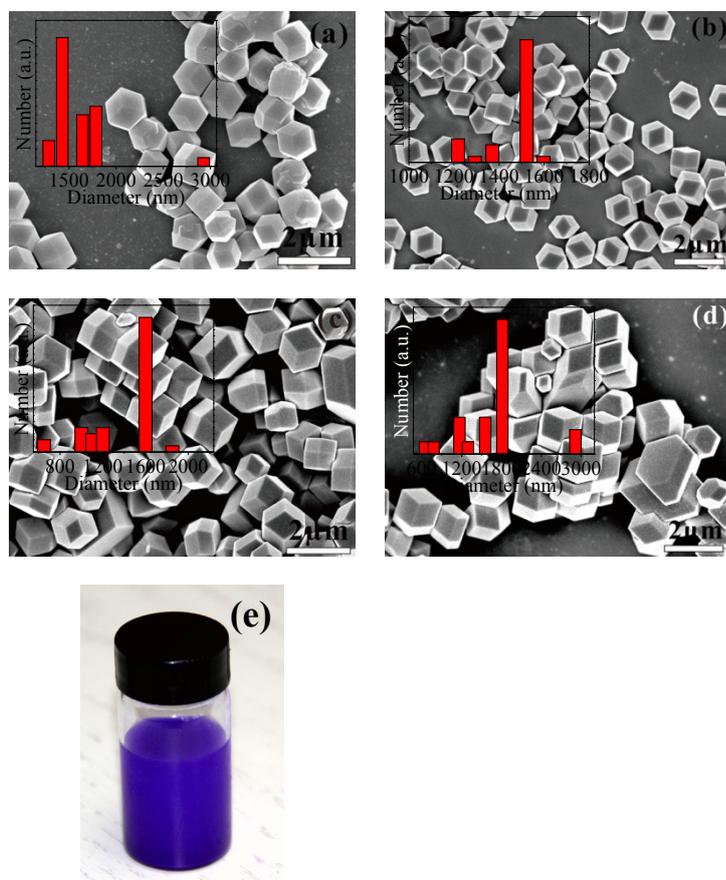


Figure S1 SEM images of the samples synthesized from different molar ratios of Hmim/ $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$: (a) 1:4, (b) 1:8, (c) 1:16, (d) 1:32, and photograph of a purple suspension of the dry ZIF-67 powders dispersed in methanol (e). The insets show the particle size distribution of ZIF-67 crystals.

S2

S2

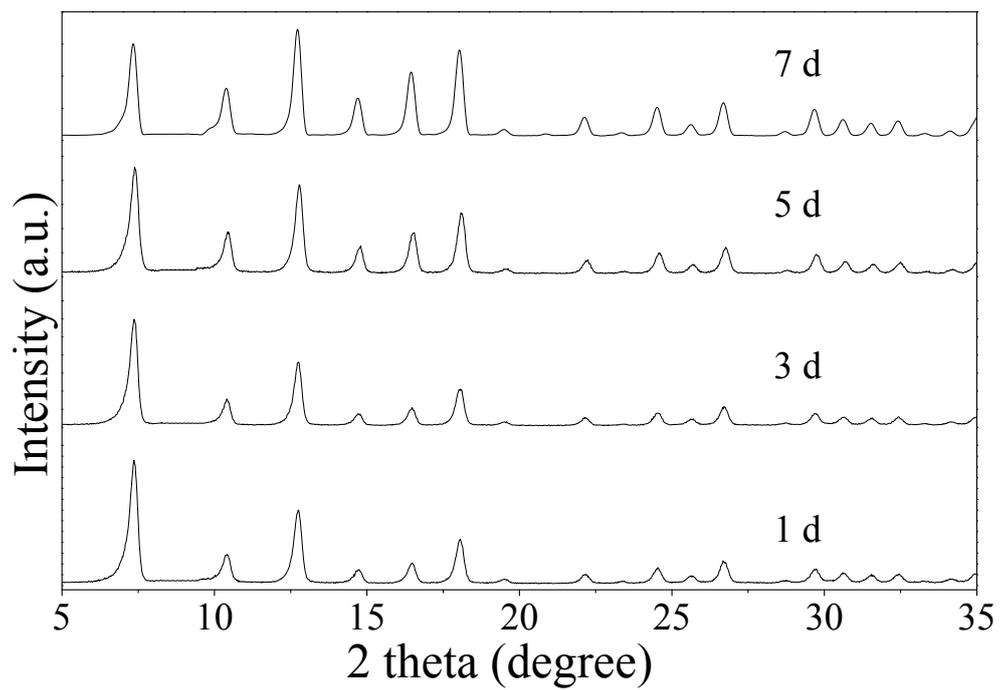


Figure S2 XRD patterns of the as-synthesized ZIF-67 samples after soaking in RT water.

S3

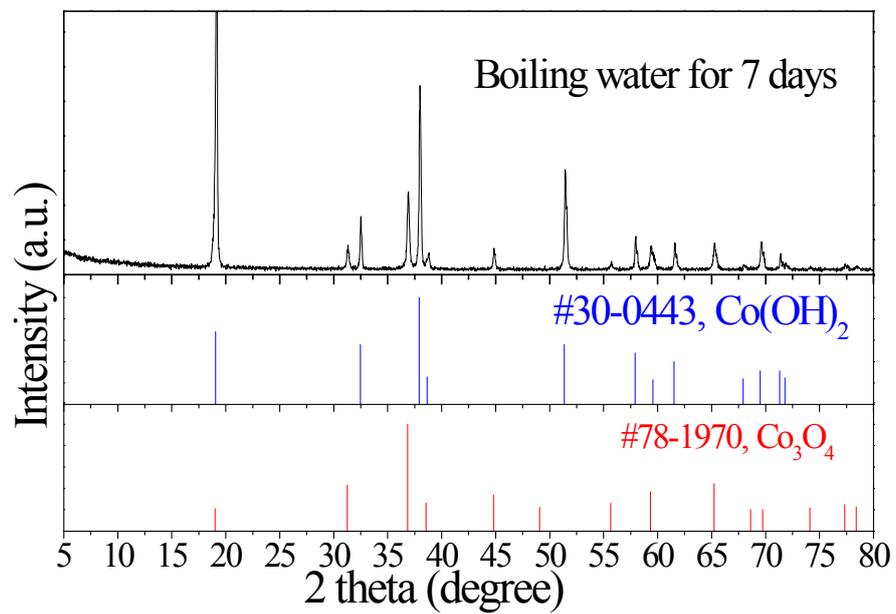


Figure S3 Wide angle XRD of the products derived from ZIF-67 after soaking in boiling water for 7 days.

S4

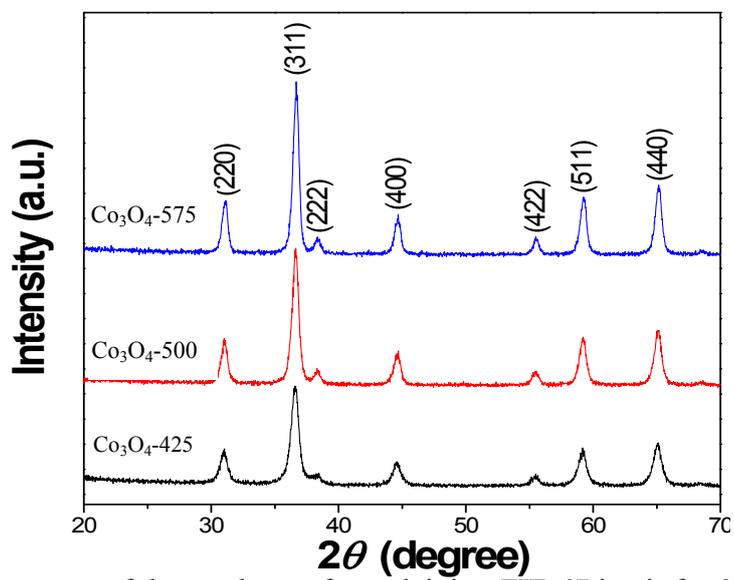


Figure S4 XRD pattern of the products after calcining ZIF-67 in air for 30 min at 425, 500 and 575 °C, respectively.

S5

S5

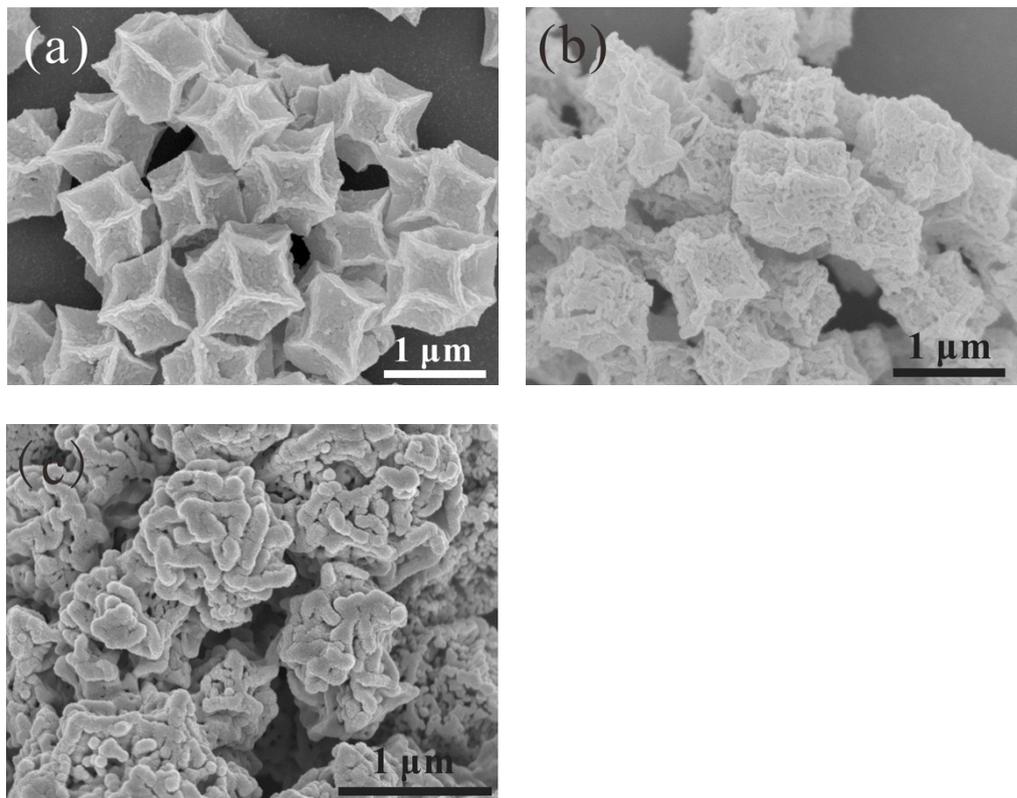


Figure S5 SEM images of Co_3O_4 -425 (a), Co_3O_4 -500 (b) and Co_3O_4 -575 (c).

S6

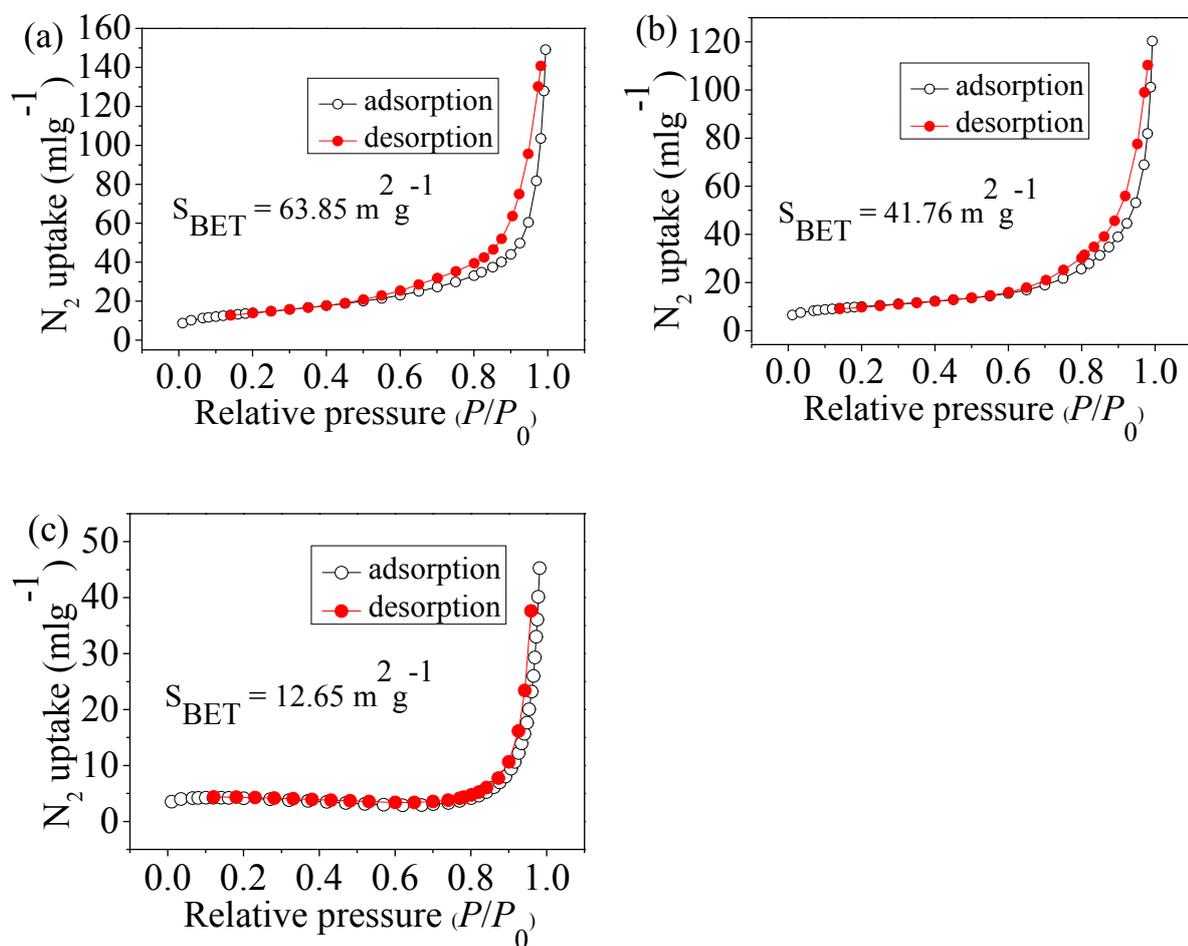


Figure S6 Nitrogen physisorption isotherms of the ZIF-67 templated Co_3O_4 : (a) Co_3O_4 -425, (b) Co_3O_4 -500 and (c) Co_3O_4 -575.

S7

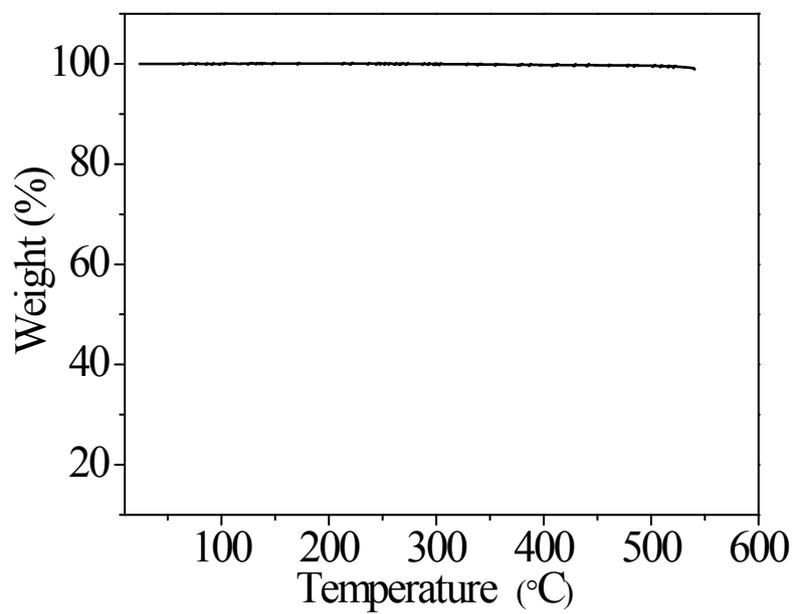


Figure S7 The TGA results of the recovered catalyst after the reaction.

S8